

Amendments to the Claims:

1. (Canceled)

2. (Currently Amended) A microelectromechanical (MEMS) structure on a substrate,
5 comprising:

a platform connected with a set of one or more bimorph flexures; and

the set of bimorph flexures connecting the platform with the substrate, each bimorph
flexure comprising a first layer comprised of a first material and a second layer comprised of a
second material, the first and second materials having substantially similar particular intrinsic
10 residual stress (IRS) characteristics and coefficients of thermal expansion (CTEs), each bimorph
flexure having a curvature resulting from a first component proportional to the difference in IRS
characteristics of the first and second materials and a second component proportional to the
difference in CTEs of the first and second materials, the first component being larger than the
second component.

3. (Canceled)

4. (Currently Amended) The MEMS structure of claim 3 2, wherein the curvature of each
bimorph flexure ~~has a curvature, the curvature resulting substantially~~ results predominantly from
20 the first component ~~difference in IRS characteristics of the first and second materials and not~~
~~resulting substantially from the difference in the CTEs of the first and second materials.~~

5. (Currently Amended) The MEMS structure of claim 3 2, wherein the curvature of each
bimorph flexure ~~has a curvature that~~ is not substantially sensitive to changes in temperature.

6. (Currently Amended) The MEMS structure of claim 3 2, wherein ~~each bimorph flexure has a curvature that is the sum of a first component proportional to the IRS in the bimorph flexure and a second component proportional to the CTE mismatches in the bimorph flexure~~, the first component ~~being~~ is larger than the second component by a factor of approximately one thousand or more.

7. (Previously Presented) The MEMS structure of claim 6, wherein the first component is larger than the second component by a factor of approximately one thousand or more at normal operating temperatures of the MEMS structure.

8. (Currently Amended) The MEMS structure of claim 3 2, wherein the first material comprises silicon and the second material comprises silicon nitride, or the first material comprises polysilicon and the second material comprises ceramic, SiC, or silicon nitride (SixNy).

9. (Canceled)

10. (Canceled)

11. (Currently Amended) The MEMS structure of claim ~~10~~ 2, wherein the second layer extends over a portion of the first layer that is less than the entire length of the first layer, the second layer being affixed to the first layer along the entire length of the second layer.

12. (Previously Presented) The MEMS structure of claim 11, wherein the second layer provides a residual stress difference between the top and bottom portions of the first layer.

13. (Currently Amended) The MEMS structure of claim 3 2, wherein:

~~each bimorph flexure has a curvature that~~ the set of bimorph flexures elevates the platform above the substrate; and

the platform is an actuator segment or mirror segment.

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14. (Currently Amended) A method for fabricating a microelectromechanical (MEMS) structure, the method comprising:

forming a platform connected with a set of one or more bimorph flexures; and

for each bimorph flexure in the set of bimorph flexures:

10 forming a first layer ~~of the bimorph flexure, the first layer comprising~~ comprised of a first material; and

 forming a second layer ~~of the bimorph flexure, the second layer comprising~~ comprised of a second material, the first and second materials having ~~substantially similar~~ particular intrinsic residual stress (IRS) characteristics and coefficients of thermal expansion (CTEs), each bimorph flexure having a curvature resulting from a first component proportional to the difference in IRS characteristics of the first and second materials and a second component proportional to the difference in CTEs of the first and second materials, the first component being larger than the second component.

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20 15. (Canceled)

16. (Currently Amended) The method of claim ~~15~~ 14, wherein the curvature of each formed bimorph flexure ~~has a curvature, the curvature resulting substantially~~ results predominantly from the first component ~~difference in IRS characteristics of the first and second materials and not~~ resulting substantially from the difference in the CTEs of the first and second materials.

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17. (Currently Amended) The method of claim ~~15~~ 14, wherein the first material comprises silicon and the second material comprises silicon nitride, or the first material comprises polysilicon and the second material comprises ceramic, SiC, or silicon nitride (SixNy).

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18. (Currently Amended) The method of claim ~~15~~ 14, wherein forming the second layer comprises forming the second layer external to the first layer.

19. (Currently Amended) The method of claim ~~15~~ 14, wherein forming the second layer
10 comprises forming the second layer to extend over a portion of the first layer that is less than the entire length of the first layer and forming the second layer to be affixed to the first layer along the entire length of the second layer.

20. (Currently Amended) The method of claim ~~15~~ 14, wherein the first and second layers are
15 formed under conditions that produce substantially different intrinsic residual stress (IRS) characteristics in the first and second materials.

21. (Previously Presented) The method of claim 20, wherein:
forming the first layer comprises tuning the residual stress of the first layer; and
20 forming the second layer comprises forming the second layer under a specific ratio of the reactant gasses, deposition pressure, and deposition temperature to produce a desired residual stress of the second layer.

22. (New) The method of claim 20, wherein the first and second materials comprise
25 polysilicon.

23. (New) The MEMS structure of claim 2, wherein the first and second layers are formed under conditions that produce substantially different IRS characteristics in the first and second materials.

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24. (New) The MEMS structure of claim 24, wherein the first and second materials comprise polysilicon.